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Fertility of College Graduates

A College Study Postscript

College graduates are now marrying at a much earlier age than their parents. They are having children much sooner. They are having more children and are spacing them much closer together. And they seem to be following the general trend of the younger generation by completing their families earlier than their parents.

This might not be news to most American families whose progeny have graduated from college since the end of World War II. Parents and social scientists alike have been aware of the general trend. Between 1946 and 1956, the College Study of the Population Reference Bureau regularly recorded and reported data confirming that the fertility of the younger college graduates was higher than that of the graduates of a generation ago. Additional data, gathered in 1955 but processed and analyzed only recently, now make it possible to measure the degree of these marriage and fertility differences in two college classes, those graduated in 1930 and in 1945.

The average age at first marriage in 1955 in the United States was 23 for men and 20 for women. For the class of 1945, the average age at marriage was 24 years for both sexes and it was 25 years for both sexes for the class of 1930. However, the men married at a slightly later age than the women.

Ten years after graduation, fewer of the younger graduates remained single: 13 percent of the men and 10 percent of the women among the younger graduates, compared with 20 percent of the men and 27 percent of the women among the older graduates.

The proportion not married ten years after graduation continued to be higher among graduates of Roman Catholic colleges: 20 percent of the men and 23 percent of the women in the class of 1945, compared with 38 percent of the men and 43 percent of the women in the class of 1930.

When the survey was taken in 1955, the 10-year women graduates of the class of 1945 who were about midway through their family-building years already had a greater average number of children than the 25-year women of the class of 1930, who had reached the end of the reproductive span. But the men of both classes had still more children than the women in both groups.

Even though the younger graduates had babies at a faster rate than

the older graduates, their contribution to the postwar baby boom was not as great as either high school or grade school graduates. So the differential birth rate which has concerned eugenicists and others still persists. The 10-year women college graduates did not reach their fertility peak until 1952. Once they started having babies, they continued to have them over a longer period of time than other women of their age.

These data confirm the belief that a revolutionary change in attitudes toward marriage and family has occurred in this country, even among college graduates. For several decades, college graduates led the small-family trend. Even during the prosperous 1920's, they were marrying much later than others, and they were not having enough children to replace themselves in the population.

The low fertility of the college class of 1930 further reflects the fact that this class graduated into a world gripped by an economic depression — a world hardly conducive either to marriage or family building.

In contrast, the class of 1945 came into a world standing on the threshold of unprecedented economic prosperity. The military demands of war had curtailed consumer production. The tremendous backlogs of need and purchasing power sparked the subsequent prosperity which the nation has experienced in varying degrees ever since the end of World War II.

The improved economic state of the nation created a favorable climate in which the deeply set attitudes toward marriage and family could change more rapidly. In the 1930's, relatively few college students were married when they graduated. According to a current Census Bureau report, about 25 percent of the men and women attending college in 1958 were married.

THE COLLEGE STUDY AND THE 1955 SUBSAMPLE

During the 11 years from 1946 to 1956, the Population Reference Bureau conducted an annual College Study in the United States to survey the fertility of 10-year and 25-year graduates. This measured the current and completed fertility of a total of 153,596 graduates from 1,596 colleges. Reports of the surveys of 1954, 1955 and 1956 appear in separate issues of the *Bulletin* for those years, and readers are referred to them for complete details of the results.

The College Study is unique in that it provides annual data on the marriage and fertility patterns of students who attended different types of colleges, including those of different religious affiliation. It is also unique in that data are available about the fertility of men as well as women.

The 1955 Study was based on 22,145 questionnaires returned by 178 colleges. Of these, 9,343 questionnaires from graduates in 70 colleges (listed in the Appendix) provide the data for the more detailed analysis reported here. The study of this subsample was made by Patience Lauriat, a demographer formerly on the Bureau staff. She summarized the results in a

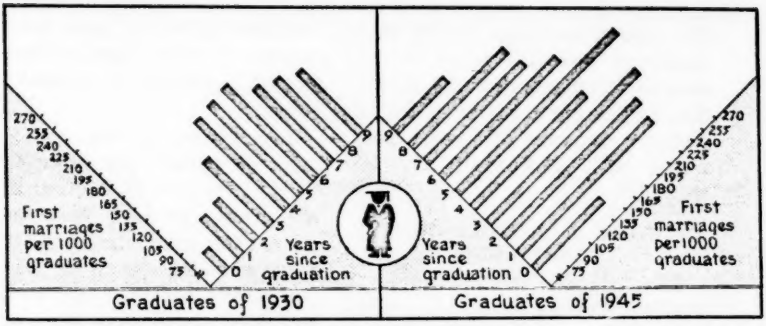

FIGURE 1: ANNUAL FIRST MARRIAGE RATES, GRADUATES OF 1930 AND 1945
In response to differing social and economic conditions, the younger graduates, those of the class of 1945, married at a faster rate than the older graduates of the class of 1930 during the ten years immediately after graduation.

paper given at the 1959 Annual Meeting of the Population Association of America. However, this issue is based on her more detailed report.

AGE AT MARRIAGE

Figure 1 presents annual first marriage rates for all graduates during the ten years immediately following graduation. The older graduates, both men and women, married at a later age than the younger graduates. Stated in other terms, the marriage rate was slower for the older than for the younger graduates. The contrast was much greater for women than for men: 171 first marriages per 1,000 women compared to only 73 per 1,000 for men.

Each year, with the exception of the men of the class of 1939, the annual first marriage rate was higher for the younger than for the older graduates. The greatest differences were recorded in certain years: women marrying in 1931 compared with those marrying in 1946; 1932 with 1947; and 1937 compared with 1952. These differences probably reflect the attitude of the women graduates to the changed economic conditions. The depression years of 1931 and 1932 inhibited marriage while the post-World War II years of 1946 and 1947, with prosperity at a high level and men returning from military service, greatly favored marriage. Furthermore, many marriages took place which were postponed during the depression and war years.

There are also differences in the marriage rates by sex. Among the older graduates, the women married at a faster rate than the men during the two years immediately after graduation, but by 1934 this trend was reversed in favor of the men. Thus, an appreciably higher proportion of men married during the first ten years after graduation. Among the younger graduates, the marriage differential between the sexes was reversed during the first ten years, and a higher proportion of women married. The men of

both classes married at a slightly later age than the women. The median age at marriage for the older graduates was 25.4 years for the men and 25.0 years for the women. The median age at marriage for the younger men was 24.2 years, compared with 23.5 years for the women.*

CATHOLIC COLLEGE GRADUATES MARRY LATER

The data for the subsample of the 1955 College Study were tabulated by the type of college which the graduates attended.† Obviously, because a person graduated from one or another type of college he is not necessarily a member of the faith which controls that college. However, it seemed reasonable to assume that differences in the marital and fertility patterns of graduates of the various kinds of colleges might reflect the homogeneity of the groups involved.

In an effort to measure the differences, it can be assumed that most of the persons graduating from Roman Catholic colleges were Roman Catholics while the graduates of Protestant controlled colleges were Protestants. It can also be assumed that those who attended colleges controlled by state governments probably came from less wealthy families than graduates of private, nondenominational colleges.

Proportions remaining single by type of college are presented in Table I for each of the four graduate groups in each year for ten years after graduation. In all four types of colleges, more of the older graduates—both men and women—remained single than the younger graduates. Among the latter group, except for the graduates of Roman Catholic colleges, a higher proportion of men remained single.

Higher proportions of the graduates of Roman Catholic colleges—younger and older, men and women alike—remained single ten years following graduation than graduates of other kinds of colleges. The difference was most pronounced for the older men: 38.2 percent of the men of the class of 1930 in Roman Catholic colleges remained single, compared to only 19.9 percent of all older men. This differential may reflect an older age of marriage for Roman Catholics as well as a high proportion of men who enter the priesthood.

ANNUAL BIRTH RATES

Figure 2 shows comparisons between the fertility of women college graduates and that of all women of the comparable birth cohort.‡ The 1930 graduates are compared

*Based on an assumed median age at graduation of 21.5 years for both men and women, computed for women enrolled in the fourth year of college. (See U. S. Bureau of the Census, *1950 Census of Population, Vol. II, Characteristics of the Population, Part I*, United States Summary; Washington, Government Printing Office, 1953; Table 112.)

†Four types of colleges were designated, based on the control of the college: (1) governmental, (2) private, nondenominational, (3) Protestant, and (4) Roman Catholic, including seminaries.

‡A birth cohort is all the persons born during a specified period. In this case, all the women born during specified years.

TABLE I: ANNUAL PERCENT REMAINING SINGLE, BY TYPE OF COLLEGE ATTENDED AND SEX: GRADUATES OF 1930 AND 1945

Graduates of 1930						Graduates of 1945					
Year	Total	Governmental	Nondenominational	Protestant	Roman Catholic	Year	Total	Governmental	Nondenominational	Protestant	Roman Catholic
					MEN						
1930	92.4	89.8	92.6	94.6	98.5	1945	88.7	85.2	90.2	89.3	95.1
1931	83.7	80.0	90.9	86.4	98.5	1946	74.7	69.0	75.6	76.6	90.2
1932	75.0	72.9	82.2	76.4	88.2	1947	59.3	54.5	59.4	61.0	80.5
1933	64.7	63.5	75.4	61.5	86.8	1948	46.3	46.2	46.9	44.5	68.3
1934	52.8	52.0	61.5	50.6	79.4	1949	37.6	37.5	38.8	37.0	54.9
1935	42.9	41.5	51.4	41.7	69.1	1950	28.9	29.6	29.0	30.9	41.5
1936	34.9	33.5	42.7	34.3	58.8	1951	22.0	23.1	23.2	24.6	28.0
1937	29.0	28.0	36.1	28.6	54.4	1952	18.4	19.1	19.6	21.1	25.6
1938	23.8	23.9	29.4	23.6	50.0	1953	14.6	16.6	14.6	17.9	22.0
1939	19.9	21.3	24.4	20.2	38.2	1954	12.6	15.5	12.1	15.9	19.5
					WOMEN						
1930	91.1	91.1	90.7	93.4	98.6	1945	84.6	83.2	83.5	85.2	92.7
1931	82.5	79.7	80.8	86.5	91.4	1946	63.0	59.5	61.7	64.2	79.9
1932	74.1	71.9	71.5	78.6	84.9	1947	47.3	43.1	47.0	48.2	66.4
1933	64.1	63.6	61.9	66.8	77.7	1948	34.9	32.7	33.6	34.9	56.0
1934	54.5	56.6	50.1	57.5	69.1	1949	27.7	26.7	26.0	27.8	45.9
1935	46.3	48.6	42.3	48.9	62.6	1950	20.4	20.4	19.2	20.5	35.5
1936	39.3	44.3	33.9	41.5	54.7	1951	16.6	17.4	15.6	16.3	29.7
1937	34.0	39.2	28.8	36.2	48.2	1952	13.5	14.7	12.5	13.2	26.3
1938	30.5	36.2	24.9	32.4	46.8	1953	11.4	12.4	10.1	11.6	23.6
1939	27.3	33.8	22.5	28.2	43.2	1954	10.2	11.1	9.4	9.8	23.2

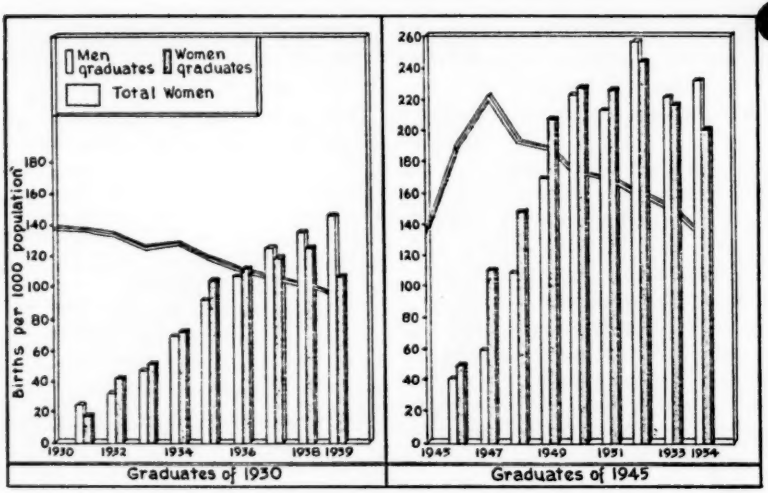

FIGURE 2: ANNUAL BIRTH RATES, GRADUATES OF 1930 AND 1945 BY SEX AND TOTAL WOMEN BORN 1908-1909 AND 1923-1924

In contrast to the fertility of all older women, the fertility of the older graduates increased during the period 1930-1939. Among the younger groups, the birth rates for all women reached a peak in 1947 whereas the college graduates' birth rate was highest in 1952.

to all women born in 1908 and 1909; and the 1945 graduates are compared to all women born in 1923 and 1924. The births represented in Figure 2 occurred during two periods: 1930 to 1939 for the older women and 1945 to 1954 for the younger women.*

The most striking feature of Figure 2 is the comparison between the birth rates of the older and younger graduate groups with those of the older and younger cohorts of all women. Among the older graduates, the annual birth rates for both men and women generally tended to rise throughout the period 1930-1939. In contrast, the annual birth rate for all women was much higher in 1930; it declined during the 10-year period; and it was lower than the birth rates of both men and women graduates during the years 1937 to 1939. This reflects in part the different pattern of age at marriage of college graduates.

Among the younger group, fertility increased for the men and women graduates and for all women. However, the birth rate for all women reached a peak in 1947, but

*Rates for total women are based on P. K. Whelpton, *Cohort Fertility, Native White Women in the United States* (Princeton: Princeton University Press, 1953) and mimeographed continuation sheets.

the birth rates for men and women graduates did not reach their highest levels until 1952.

Although women college graduates start having families slightly later than other women of their age, they tend to catch up to some extent during later years. Among the older women, birth rates of all women were slightly lower than the rates for college women during 1937 to 1939. Among the younger women, birth rates of all women were considerably lower from 1950 to 1954.

As stated before, the younger graduates whose fertility peak was reached in 1952 did not contribute as many births in the early baby boom years as did all women whose highest fertility was recorded in 1947. This reflects the delayed marriage age which a college degree used to impose—and still does, but to a lesser extent. Many of the women who did not go to college were already married and had started families by the time the college women graduated.

For most of the 10-year period, the fertility rates of the younger graduates were about twice as high as the rates for the older graduates. The same trend is seen when comparing the fertility rates of the older and younger cohorts of all women, but the differential is not as great.

For all women, the greatest increase in birth rates between the cohorts of 1908-1909 and 1923-1924 occurred at age 23.5 years. This difference coincides with the 1947 baby boom. The greatest absolute increases for college women occurred between the ages of 25.5 and 28.5 years. The greatest absolute increases for the college men were between ages 26.5 and 28.5 years. This reflects the older age at marriage for men.

For every age, the relative increase in the fertility of female college graduates was greater than that for all women. In most cases, it was more than twice as high. The absolute increase in fertility for all women was higher than that for college women at ages 22.5 and 23.5 years. For the other ages, the absolute increases in the fertility of college women were consistently at least twice as great. These differences in relative and absolute increases in the fertility of the women graduates, compared to all women of comparable age, partially account for the temporary decline in fertility differentials during the 1940's.

ECONOMIC INFLUENCE ON FAMILY SIZE

Figure 3 would seem to indicate that the birth rates of older college graduates were more sensitive to economic changes than were the birth rates of persons who had less education. The slope of the two lines appears to imply that the depression of the 1930's curtailed the families of older graduates to a far greater extent than the families of all women.

In contrast, the prosperous years which followed World War II seemed to stimulate the fertility of the younger graduates to a greater extent than that of all women. The cumulative birth rate for college

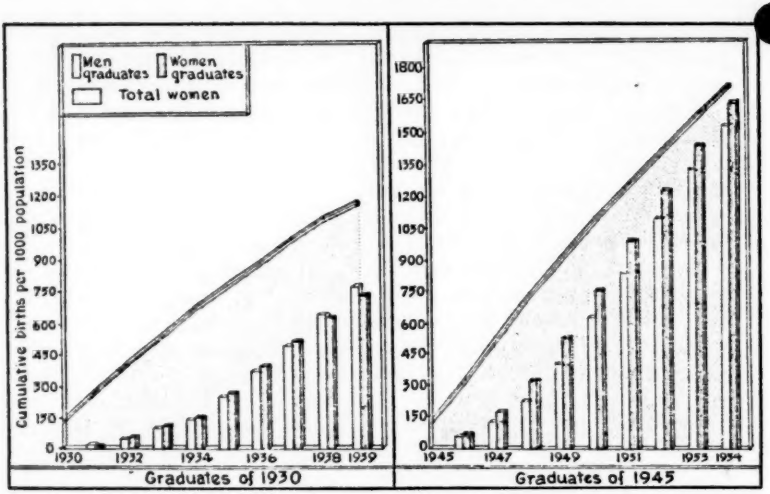

FIGURE 3: CUMULATIVE BIRTH RATES, GRADUATES OF 1930 AND 1945 BY SEX AND TOTAL WOMEN BORN 1908-1909 AND 1923-1924

Among the older groups, the college graduates had experienced considerably lower fertility by the end of the period 1930-1939 than had all women. In contrast, the cumulative fertility of the younger college graduates was almost as high as that for all younger women by the end of the comparable 10-year period, 1945-1954.

women ten years after graduation was almost as high as the rate for all women—1,639 per 1,000 for college women, compared to 1,716 for all women.

FEWER GRADUATES CHILDLESS

A comparison of the number of children born to college graduates married within five years of graduation is shown in Figure 4. By the end of ten years after graduation, the decline in the proportion who had no children or only one child is clearly evident. Among the older graduates, men and women alike, about one out of five was childless. Among the younger graduates, only about one out of ten was childless. Among the men, the proportion declined from 19.0 percent for the older men to 9.4 percent for the younger men. Among women graduates, the decline was from 20.5 percent to 10.7 percent, respectively. The proportion with only one child declined from 43.6 percent for the older men to 15.5 percent for the younger men; from 36.0 percent to 18.4 percent, respectively, for the women.

LARGER FAMILIES IN VOGUE

Another measure of fertility used to assess trends in family size is an individual's progress from childlessness to having one child, then two children, etc. Technically, this is called a parity progres-

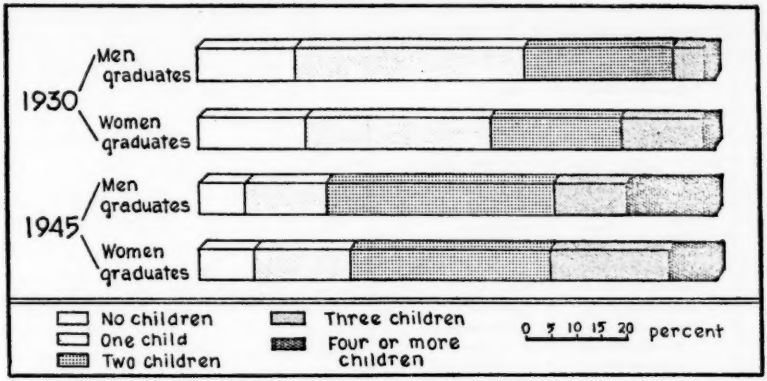

FIGURE 4: PERCENT DISTRIBUTION BY NUMBER OF CHILDREN EVER BORN TO GRADUATES OF 1930 AND 1945 MARRIED WITHIN FIVE YEARS AFTER GRADUATION

When the older and younger graduates are compared in terms of the number of children born within ten years after graduation, large declines in the proportions remaining childless or having only one child can readily be seen.

sion ratio.* It should be pointed out that such a ratio is not a birth probability.

Figure 5 presents the comparison between the older and younger graduates married within five years of graduation in terms of the proportions of married graduates who had one child and went on to have a second child. Within ten years after graduation, larger proportions of the younger graduates had one and two children. With few exceptions, the proportions having first and second children are generally higher for the 1945 graduates. However, among the 1930 graduates, the proportions having their first child in the later years of marriage were higher than those for the younger graduates. This reflects that many older graduates waited much longer to start their families than the younger graduates did.

CONCLUSION

It was a fortunate coincidence that the College Study was initiated in 1946, at a time of historic changes in the family patterns of the American people. The Study has provided a measure of the fertility of the college graduate group during this transition. It reveals in richer detail certain trends reported by decennial censuses and surveys.

A unique feature of this Study of the time of marriage and family formation is that it measures the fertility of men as well as women. It permits a year-to-year comparison between the college graduate group and the total population.

*For this subsample, the ratios were computed separately for each marriage cohort, and thus are termed parity-duration progression ratios.

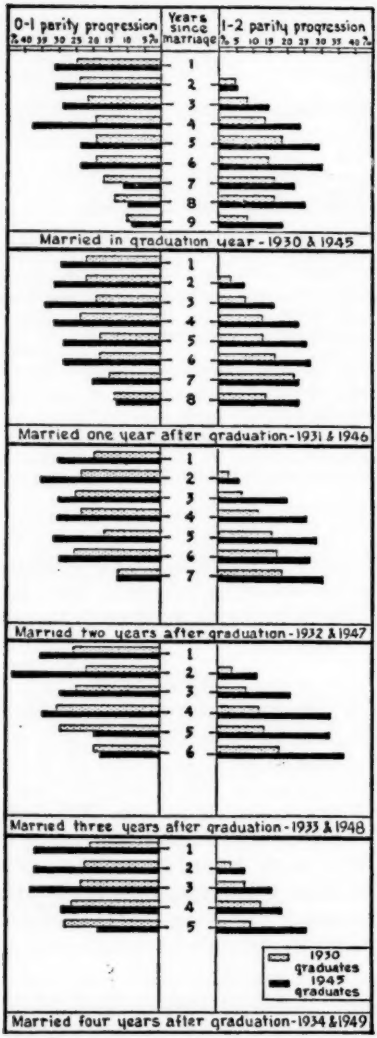
0-1 parity progression
Years since marriage
1-2 parity progression
Married in graduation year - 1930 & 1945
Married one year after graduation - 1931 & 1946
Married two years after graduation - 1932 & 1947
Married three years after graduation - 1933 & 1948
1930 graduates
1945 graduates
Married four years after graduation - 1934 & 1949

FIGURE 5: PROPORTIONS OF MARRIED GRADUATES OF 1930 AND 1945 HAVING ONE AND TWO CHILDREN, BY YEAR OF MARRIAGE AND DURATION OF MARRIAGE

The Study confirmed the downward trend in college graduate fertility during the 1920's and early 1930's; it pinpointed the turning point; and it plotted the upturn which began in the late 1930's and greatly accelerated after the mid-1940's. Through the entire 11 years of the College Study, the fertility of the older graduates increased only slightly but that of the younger graduates increased from an average of one child per graduate within ten years for the class of 1936 to nearly two children per graduate for the class of 1946.

This is welcome news. The competence of future generations of Americans depends, in large part, on the more gifted citizens at least replacing themselves in the population.

Eugenically, this trend is important because it at least temporarily reduces the very sharp differential birth rate of earlier years. Many earlier surveys had revealed that the citizens of tomorrow were being born in disproportionate number to that part of the population which had not overtly demonstrated any particular abilities to transmit to their progeny. During 1940-50, fertility increases were greatest among people in the higher socio-economic brackets.

This does not mean that the differential has been eliminated. A sample survey made by the Bureau of the Census in 1957 indicated that it still persists and may again be increasing as the less educated continue to have higher birth rates.

The Board of Trustees of the Population Reference Bureau has

decided that the Bureau will not continue the College Study because of technical difficulties and the expense of surmounting them. The Bureau hopes that some survey organization already equipped for such an undertaking will continue this Study. The Bureau will gladly make available its accumulated records, facilities and experience.

The first College Study, conducted in 1946, surveyed the graduates of the classes of 1921 and 1936. Ten years after graduation the graduates of the latter class averaged only one child per graduate. In 1961, these graduates will celebrate their 25th anniversary. A survey of this group at that time would reveal important information not now known: an exact measure of how these graduates of 1936 fared reproductively during the intervening 15 years—years of sustained high fertility throughout the country.

Robert C. Cook, *Editor*

(This *Bulletin* is based on a special report by Patience Lauriat. The text was written by Annabelle Desmond.)

Appendix: Colleges in the 1955 College Study Subsample

Name and Location of College	25-Year Men			10-Year Men			25-Year Women			10-Year Women		
	Total graduates	With known address	Respondents	Total graduates	With known address	Respondents	Total graduates	With known address	Respondents	Total graduates	With known address	Respondents
Adelphi, N. Y.	----	----	----	----	----	----	137	104	55	106	62	23
Akron, University of, Ohio	70	70	23	44	44	13	90	90	44	62	62	49
Albright, Pa.	49	42	27	15	15	12	29	28	24	35	35	24
Alfred University, N. Y.	40	40	34	14	12	9	30	29	22	31	31	23
Augustana, Ill.	27	27	21	a	a	23	21	21	17	37	37	28
Augustana, S. D.	23	23	18	a	a	7	26	26	18	25	25	22
Bates, Me.	69	63	49	44	42	36	55	53	45	63	63	47
Calvin, Mich.	61	55	41	21	18	12	----	----	----	44	43	25
Carnegie Inst. of Tech., Pa.	326	237	192	177	136	87	196	150	80	154	124	76
Chico State, Calif.	42	26	23	a	a	1	61	17	11	38	20	14
Cornell, Iowa	34	31	29	22	22	20	52	50	29	56	56	47
DePauw, Ind.	157	133	109	37	34	24	148	140	108	132	125	92
Drake University, Iowa	122	98	44	27	25	11	230	197	49	119	103	35
Earlham, Ind.	16	16	13	12	12	10	44	44	36	38	38	33
Emmanuel, Mass.	----	----	----	----	----	----	66	64	57	109	109	101
Emory University, Ga.	87	82	55	62	61	46	23	22	75	a	a	67
Florida State University	----	----	----	----	----	----	221	162	107	378	267	167
Fontbonne, Mo.	----	----	----	----	----	----	18	18	8	28	26	19
Gettysburg, Pa.	123	102	83	31	24	19	18	17	14	33	30	23
Goshen, Ind.	14	14	14	23	23	21	21	21	19	22	21	22
Grove City, Pa.	65	57	39	a	a	7	44	44	35	55	55	32
Guilford, N. C.	17	16	16	a	a	4	17	17	15	16	16	15
Gustavus Adolphus, Minn.	54	50	41	18	17	14	47	43	29	29	26	17
Hamline University, Minn.	42	37	25	a	a	6	38	36	21	41	40	31
Haverford, Pa.	69	69	53	96	96	73	----	----	----	----	----	----
Heidelberg, Ohio	31	30	24	a	a	8	42	42	30	35	34	28
Idaho, College of	a	a	5	----	----	----	17	17	8	----	----	----
Immaculate Heart, Calif.	----	----	----	----	----	----	a	a	4	57	49	23
Juniata, Pa.	60	54	45	a	a	9	48	41	39	39	37	26
Linfield, Ore.	27	22	18	a	a	4	19	15	15	18	14	11
Loras, Iowa	45	25	16	28	24	5	----	----	----	----	----	----
Louisiana Polytech. Institute	33	30	28	a	a	7	54	42	42	145	117	111

MacMurray, Ill.	----	----	----	----	----	----	41	41	35	89	89	78
Miami University, Ohio	126	113	89	42	36	21	216	175	96	214	189	88
Mich Coll. of Mining & Tech.	47	47	33	15	15	10	----	----	----	[a]	[a]	3
Mills, Calif.	----	----	----	----	----	----	102	93	63	88	83	67
Mt. Union, Ohio	52	45	32	[a]	[a]	6	41	35	26	37	34	30
Nazareth, Ky.	----	----	----	----	----	----	19	17	5	25	24	7
New Mexico, University of	50	39	28	55	48	32	69	55	36	51	41	28
Newark Coll. of Eng., N. J.	44	38	38	55	45	24	[a]	[a]	1	[a]	[a]	1
Norwich University, Vt.	55	47	41	64	59	41	----	----	----	----	----	----
Occidental, Calif.	61	61	48	53	50	33	54	52	30	111	109	64
Ohio University	132	125	104	39	38	23	189	185	120	216	216	150
Oklahoma, University of	643	625	295	295	250	174	350	344	187	480	413	141
Oklahoma College for Women	----	----	----	----	----	----	86	77	54	78	75	62
Otterbein, Ohio	43	39	32	19	18	16	46	45	31	38	38	29
Pacific University, Ore.	[a]	[a]	9	[a]	[a]	3	21	21	14	20	20	10
Pomona, Calif.	77	73	50	20	18	13	86	85	68	87	87	63
Randolph-Macon, Va.	----	----	----	----	----	----	125	116	72	134	132	96
Rhode Island, University of	80	76	49	35	30	21	32	30	18	50	35	31
St. Elizabeth, Coll. of, N. J.	----	----	----	----	----	----	73	65	31	89	81	42
St. Mary's, Ind.	----	----	----	----	----	----	46	45	32	44	44	37
St. Mary's, Minn.	66	48	18	138	108	37	----	----	----	----	----	----
St. Vincent, Pa.	22	16	2	22	17	6	----	----	----	----	----	----
St. Xavier, Ill.	----	----	----	----	----	----	[a]	[a]	4	65	61	38
Siena, N. Y.	----	----	----	13	13	10	----	----	----	[a]	[a]	2
Simmons, Mass.	----	----	----	----	----	----	211	202	158	201	192	143
Sweet Briar, Va.	----	----	----	----	----	----	85	76	59	80	72	59
Trinity, D. C.	----	----	----	----	----	----	99	93	33	101	101	31
Vanderbilt, Tenn.	119	103	84	132	128	880	51	46	31	79	78	55
Wartburg, Iowa	[a]	[a]	3	22	22	21	----	----	----	9	6	6
Washburn Municipal U., Kans.	39	35	25	27	24	15	59	55	38	47	43	32
Washington & Jefferson, Pa.	157	136	85	183	136	77	----	----	----	----	----	----
Washington Missionary, D. C.	[a]	[a]	4	49	49	30	[a]	[a]	5	26	25	15
Western Maryland	43	34	27	21	19	12	60	54	38	58	53	42
Western Reserve Univ., Ohio	171	168	75	107	104	30	139	139	83	[a]	[a]	90
Westminster, Pa.	48	45	27	[a]	[a]	5	53	53	38	62	61	40
Wheaton, Ill.	41	39	33	61	59	50	72	65	32	97	96	63
Wooster, College of, Ohio	78	77	68	41	41	32	86	80	64	86	85	79
Wyoming, University of	88	67	45	26	21	10	65	49	30	66	53	44

[a] Not reported.

The Wastage of Talent

(From *America's Resources of Specialized Talent*, The Report of the Commission of Human Resources and Advanced Training. Prepared by Dael Wolfle, Director. New York, Harper & Brothers, 1954. Reprinted with permission.)

College graduates possess more than a body of knowledge concentrated in the special field in which each did his major work. They are intelligent; they are accustomed to learning; they have acquired some experience and education outside of their major fields. These assets give to many of them a vocational flexibility which lets them move into the kinds of work in which the demands and rewards are greatest.

All graduates choose their jobs and fields of work in accordance with preferences and opportunities. Graduates of engineering, medical, and other professional schools in a more specific sense than liberal arts graduates have already expressed their preferences in selecting their areas of study, and are more likely to find attractive opportunities consistent with those preferences. As a result, they show less occupational mobility than do liberal arts graduates.

Whether the career choice is made before or after leaving college, the graduate usually remains in his chosen field of work throughout the rest of his career. But even that is far from universal. Many liberal arts graduates and reasonable numbers of professional school graduates shift from one kind of work to another as their interests change and as opportunities permit. The large amount of shifting which has gone on in the past has constituted an important method of adjusting the supply of educated workers to changing occupational demands. The existence of a sizable body of educated workers, flexible enough in skill and interest to move into the fields in which the demands and rewards are greatest is a major national asset.

The United States wastes much of its talent. College graduating classes could be twice as large as they currently are, and with no loss of quality. The potential supply gets drained off, in large or small amounts, all the way through the educational system. Practically all potentially good college students enter, and most of them finish high school, but after high school the loss is large. Fewer than half of the upper 25 per cent of all high school graduates ever earn college degrees; only 6 out of 10 of the top 5 percent do. Society fails to secure the full benefit of many of its brightest youth because they do not secure the education that would enable them to work at the levels for which they are potentially qualified.

INTELLIGENCE AND OTHER DIFFERENCES

The average college graduate is markedly superior to the average nongraduate in intellectual abiilty. There is much overlapping of the two groups, for many bright people do not go to college and some mediocre ones do. But the difference in averages is substantial. Half of all college graduates come from the top 15 per cent of the total population. At the graduate school level the difference is even greater; half of the people who receive Ph.D. degrees come from the top 7 per cent of the total population.

Within the selected group of college graduates there are differences which characterize the several fields of specialization. The average ability of students who enter some fields—such as the physical sciences, engineering, law, English, and the foreign languages—is higher than is the average of those who enter other fields—such as education, business, or home economics. But there is much overlapping; every field attracts some brilliant students, and some of considerably lesser ability.

Differences in intelligence of students in the various fields at the graduate level are parallel with those found among undergraduate majors. So are the differences among college graduates who a

actually employed in each specialized field.

* * *

None of these differences is as large, however, as are the differences between college graduates and nongraduates. Every field includes a wide range of students, some bright and some less bright, some who made good grades in high school and some whose grades were not so good.

The intellectual advantage of the average college student over the average man in the general population provides a means of estimating the total number of persons who are potentially qualified for satisfactory college work. In the same way, the differences in average ability among the students specializing in different fields makes possible more precise estimates of the number potentially qualified for each field. The number of persons qualified for work, as now constituted, in such fields as physics, mathematics, law, or English is smaller than is the number who might become qualified for work in such fields as agriculture, business and commerce, education, or home economics. But we are not yet at the point of running out of brains; there are enough potentially good prospects to permit substantial growth in all fields.

UTILIZATION OF TRAINED PERSONNEL

There is some wastage and underutilization of the supply of persons trained in most specialized fields. Not nearly as much concerted effort has gone into attempts to secure optimal utilization of the nation's educated workers as went into giving them their education. The labor union, the employment office, and the industrial personnel department help to keep the country's plumbers, machinists, and clerks at work in the fields in which they are experienced, and do so more effectively than does any machinery which exists for providing the same kind of services to the country's mathematicians, linguists, and lawyers. Many colleges maintain placement offices which assist new graduates in getting their first jobs, and there are some employment services for specialized personnel. But on the whole it is easier for a carpenter to get information about job opportunities in his field than for an economist to get such information in his. The procedures which work with carpenters could not be taken over bodily and applied to economists, but improvements could be achieved in bridging the gap between college training and the first job, and in making fullest use of persons trained in the specialized fields.

Educated women are not so likely to be employed as are educated men. If they are employed, their duties are less likely to make full use of their competence. Although the United States could make substantially better use of its educated women than it now does, the possible increase in the size of the educated labor force is limited by women's greater likelihood of withdrawing from the labor force and the consequent reluctance of employers to assign them to positions of responsibility. Better utilization of educated women will require the wider adoption of flexible employment arrangements which take cognizance of the less permanent nature of their employment and which permit combining home responsibilities with outside jobs.

If all the college graduate men who are over 65 and still physically and mentally qualified for work in the specialized fields were employed, the total number of male employees in those fields would increase by not more than 2 percent. Even though this figure is small now, the problem of better utilization of older workers is socially important, and will increase in magnitude as the number of educated workers in the upper age brackets increases. One method of improving utilization is to reduce the emphasis upon age as a basis for retirement and to give greater weight to such factors as physical and mental health and the objective measurement of the older worker's abilities.

Better utilization of all segments of the educated population is possible and would be socially profitable. The number of educated women is increasing and so is the number of older workers. When demand is high is a good time to develop improved patterns of utilization of educated workers of all ages and both sexes.

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